BOOK REVIEWS

Phase-space Dynamics of Particles

by Allan J. Lichtenberg; John Wiley & Sons, Inc. New York,
Pages vii + 331, Price $ 16.00

The book is one of the Wiley series in Plasma Physics. Recently, the idea of phase space has found very useful applications to beams and accelerators, along with plasmas. This justifies the necessity of a monograph with such an unusual title. It may be hoped that it will be welcomed by those who are in the field, particularly because of the dearth of published literature. In this monograph phase-space concepts for beams, accelerators, and confined particles are reviewed and their relations to basic theory and earlier developments are given. In the first chapter, the fundamental theories are introduced by the author. The second chapter treats adiabatic invariance. The transformations of phase space associated with a collection of particles, is first treated in the first part of the third chapter, the second part of which treats the closely related topics of beam transport systems. The remaining two chapters are devoted to accelerator applications, and confinement, trapping and heating of charged particles. The level of treatment of the book is oriented to graduate students and working technicians.

N. D. S. G.

Advances in Particle Physics Vol. 2

Edited by R. L. Cool and R. E. Marshak, John Wiley & Sons,
Inc. N. Y. Price $ 24.95

The first half of this book deals with a status survey of our experimental knowledge about Boson resonances by Goldhabers and that of Baryon resonances by Barbaro-Galtieri. These are excellent reviews. There is however the problem that both of these subjects are rather fast changing. They are therefore generally covered at every major international conference on particle physics and are then available in their proceedings. The desirability of these reviews in the present format is therefore not clear. They both however devote some space to the general methods of resonance-analysis and this is of somewhat more permanent interest.

The rest of this book is concerned with theoretical problems. The weak interactions are covered in two articles; Application of Current algebra to weake decays by Mathur and Pandit and nonleptonic weak interactions by Rosen and Pakvasa. Their treatment is pedagogically oriented and should be found useful by research students. Lastly there is the review article on Broken Symmetries and Goldstone Theorem by Guralnik, Hagen and Kibble which is quite comprehensive.

V. S.